

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A display apparatus for selectively displaying a two-dimensional image and a three-dimensional image, the display apparatus comprising:

a flat panel display device which generates a two-dimensional image when two-dimensional image display is requested and generates a plurality of viewpoint images having parallax when three-dimensional image display is requested; and

a switching panel which is disposed in front of the flat panel display device to be separated from the flat panel display device by a predetermined distance and is controlled according to a type of image generated by the flat panel display device so that the two-dimensional image and the three-dimensional image can be displayed,

wherein at least one of following formulae is satisfied;

$$p_i = p(1 - \frac{d}{V_D}) \text{ and}$$

$$Ep_i = V_w \cdot \frac{d}{V_D} \text{,}$$

where “p” denotes a pixel pitch of the flat panel display device, p_i denotes a pixel pitch of the switching panel, V_D denotes a watching distance, “d” denotes a distance between the flat panel display device and the switching panel, Ep_i denotes a width of the valid image display

region transmitting light on the switching panel during three-dimensional image display, and V_w denotes a width of a visual field.

2. (original): The display apparatus of claim 1, wherein the switching panel is formed to transmit light as it is when the two-dimensional image is generated by the flat panel display device and has a structure corresponding to pixel information of the flat panel display device when a plurality of viewpoint images for forming the three-dimensional image are generated by the flat panel display device.

3. (original): The display apparatus of claim 2, wherein each pixel of the switching panel comprises:

a valid image display region which transmits light corresponding to the viewpoint images during the three-dimensional image display; and

a selective blocking region which surrounds the valid image display region and selectively transmits and blocks light according to an on/off control.

4. (original): The display apparatus of claim 3, wherein a size of the valid image display region can be adjusted.

5. (original): The display apparatus of claim 4, wherein the switching panel is a liquid crystal display which is designed to selectively turn on and off light according to a control signal.

6. (original): The display apparatus of claim 3, wherein the switching panel is a liquid crystal display which is designed to selectively turn on and off light according to a control signal.

7. (original): The display apparatus of claim 2, wherein the switching panel is a liquid crystal display which is designed to selectively turn on and off light according to a control signal.

8. (original): The display apparatus of claim 1, wherein the flat panel display device is one selected from the group consisting of a liquid crystal display, a plasma display panel, a field emission device, and an organic electroluminescence panel.

9. (original): The display apparatus of claim 1, wherein the flat panel display device generates a plurality of viewpoint images arranged in an $n \times n$ matrix in each pixel when the three-dimensional image is generated.

10. (canceled).

11. (currently amended): The display apparatus of claim 10, wherein the width E_{p_i} of the valid image display region transmitting light on the switching panel and the pixel pitch p_i of the switching panel satisfy a relationship expressed by $E_{p_i} \leq p_i$.

12. (currently amended): The display apparatus of claim 10, wherein when a distance between adjacent visual fields of different viewpoints is denoted by ΔV , an image width ΔE_{p_i} corresponding to the distance ΔV in the valid image display region is given by a following formula:

$$\Delta E_{p_i} = \Delta V \cdot \frac{d}{V_D}.$$

13. (original): The display apparatus of claim 1, further comprising a visual field expansion unit which expands a visual field in at least one of a vertical direction and a horizontal direction.

14. (original): The display apparatus of claim 13, wherein the visual field expansion unit comprises a first lens plate which expands the visual field in the horizontal direction and a second lens plate which expands the visual field in the vertical direction.

15. (withdrawn): A method of selectively displaying a two-dimensional image and a three-dimensional image, the method comprising:

selecting one of two-dimensional image display and three-dimensional image display;

driving a flat panel display device to generate the two-dimensional image or generate a plurality of viewpoint images having different parallaxes in each pixel so as to form the three-dimensional image so that the two-dimensional image or the three-dimensional image is displayed; and

driving a switching panel according to a type of image generated by the flat panel display device such that the switching panel transmits light as it is when the two-dimensional image is generated by the flat panel display device and the switching panel has a structure corresponding to pixel information of the flat panel display device when the plurality of viewpoint images are generated by the flat panel display device.

16. (withdrawn): The method of claim 15, wherein the plurality of viewpoint images are arranged in an $n \times n$ matrix in each pixel.

17. (previously presented): The display apparatus according to claim 1, wherein the switching panel forms a parallax barrier having a grid structure when the three-dimensional image display is requested.

18. (previously presented): The display apparatus according to claim 8, wherein the flat panel display device is configured to display the viewpoint images having parallax in a horizontal direction, a vertical direction and a diagonal direction.